

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW FULLY-TRAFFIC-ACTUATED SIGNAL AT THE INTERSECTION OF MD 32 AND FREEDOM AVE IN CARROLL COUNTY. IN ADDITION, A FIRE HOUSE SIGNAL WILL BE INSTALLED FOR THE SYKESVILLE FREEDOM DISTRICT FIRE DEPARTMENT. THE EXISTING HIB ALONG SB MD 32 WILL BE UPDATED WITH A NEW FY SIGN AND NEW LED SIGNAL HEADS. THE EXISTING HIB ALONG NB MD 32 WILL BE REMOVED. MD 32 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE MD 32 @ FREEDOM AVE. INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN EXCLUSIVE-PERMISSIVE LEFT TURN PHASE FOR NORTH-BOUND MD 32. THE 8" YELLOW SIGNAL HEADS AT THE FIRE HOUSE SIGNAL WILL HAVE THE CAPABILITY TO 'QUICK FLASH' WHEN THE FIRE PRE-EMPTION CALL IS PLACED.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER, VIDEO DETECTION INTERFACE EQUIPMENT, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, FOUR CHANNEL LOOP DETECTOR AMPLIFIER RACK AND ASSOCIATED HARNESS HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410)787-7631 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

CONTACT PERSONS FOR DISTRICT # 7 ARE AS FOLLOWS:

MR. JOHN CONCANNON ASSISTANT DISTRICT ENGINEER-TRAFFIC PHONE: (301) 624-8141	MR. RAY JOHNSON ASSISTANT DISTRICT ENGINEER-MAINTENANCE PHONE: (301) 624-8105	MS. ANDREA ABEND UTILITY ENGINEER PHONE: (301) 624-8115
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CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630	MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF TRAFFIC OPERATIONS 410-787-7630
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MR. ED RODENHIZER CHIEF, SIGNAL OPERATIONS 410-787-7650	MR. EUGENE BAILEY CHIEF, SIGNAL OPERATIONS 410-787-7676
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THE POWER COMPANY IS:

BGE
GAS & ELECTRIC NEW BUSINESS DEPARTMENT
410-850-4620

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
9000	NEMA SIZE 6 CABINET AND CONTROLLER	EA	1
9016	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT	EA	1
9086	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS	EA	1
9570	SHEET ALUMINUM SIGNS - GROUND MOUNT CONSISTING OF:	SF	50

2 - D95-25 (24" X 24") - GROUND MOUNT
2 - W3-3 (36" X 36") FY- GROUND MOUNT
2 - D-3(3) (72"x24") - GROUND MOUNT

9571	SHEET ALUMINUM SIGNS - POLE/MAST ARM MOUNT CONSISTING OF:	SF	46.8
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1 - D-3(1) (VAR. X 16") - MAST ARM MOUNT
1 - D-3(1) (78" X 16") - MAST ARM MOUNT
1 - M95-1 (78" X 24") - MAST ARM MOUNT
1 - R3-5(R) (30" X 36") - MAST ARM MOUNT
1 - W11-8 (36" X 36") FY - PEDESTAL POLE MOUNT

WIRING KEY

A,B,G	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	AA	1-CONDUCTOR ELECTRICAL CABLE NO.4 AWG - THHN/THWN (3 RUNS)
C,D,E,F,H,J,K,L,M	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	EX-SB	EXISTING 5-CONDUCTOR (NO.14 AWG) CABLES FOR EXISTING HIB'S ALONG NB AND SB MD 32
X,Y	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
R,S	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TC	PS	UNDERGROUND POWER SERVICE TO BE INSTALLED BY BGE
P,Q	VIDEO DETECTION CABLE	PD	UNDERGROUND PHONE SERVICE TO BE INSTALLED BY VERIZON
T,U,V,W	NON-INVASIVE DETECTOR LEAD-IN CABLE	✕	GROUND ROD

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	3
2002	TEST PIT EXCAVATION	CY	3
5001	F&I 5" WHITE OR YELLOW PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	LF	7390
5002	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	LF	4415
5005	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING	LF	85
5007	F&I HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROWS	EA	4
8001	F&I 12 INCH LED SIGNAL HEAD SECTION	EA	29
8004	F&I 8 INCH LED SIGNAL HEAD SECTION	EA	7
8007	F&I 20' LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE	EA	2
8009	F&I BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	1
8021	F&I NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'	EA	4
8022	REMOVE AND DISPOSE OF MATERIAL AND EQUIPMENT	EA	1
8024	F&I TWIN MAST ARM POLE & TWIN 50'/70' MAST ARMS ANY 'T' DIMENSION	EA	1
8025	F&I TWIN MAST ARM POLE & TWIN 50'/50' MAST ARMS ANY 'T' DIMENSION	EA	1
8026	F&I VIDEO DETECTION CAMERA AND CABLE UP TO 500'	EA	2
8035	F&I SCHEDULE 80 RIGID PVC CONDUIT UP TO 4"- TRENCHED	LF	195
8036	F&I SCHEDULE 80 RIGID PVC CONDUIT UP TO 4"- BORED	LF	80
8037	F&I WOOD SIGN SUPPORTS UP TO 4"x6"	LF	68
8039	INSTALL OVERHEAD OR GROUND MOUNTED SIGNS (INCLUDING ALL HARDWARE)	SF	96.8
8041	F&I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	190
8043	F&I METERED SERVICE PEDESTAL EMBEDDED	EA	1
8045	F&I ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN	LF	35
8047	F&I ELECTRICAL HANDHOLE	EA	5
8054	F&I ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	1000
8056	F&I ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1655
8057	F&I ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	475
8058	F&I ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC	LF	630
8061	F&I PUSHBUTTON	EA	2
8065	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND RETURNED TO SHA.

THE EXISTING CONTROLLER AND ASSOCIATED EQUIPMENT TO BE REMOVED BY THE CONTRACTOR SHALL BE RETURNED TO SHA. ALL OTHER MATERIALS AND EQUIPMENT REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT MR. ED RODENHIZER 72 HOURS PRIOR TO CONSTRUCTION.

PHASING CHART

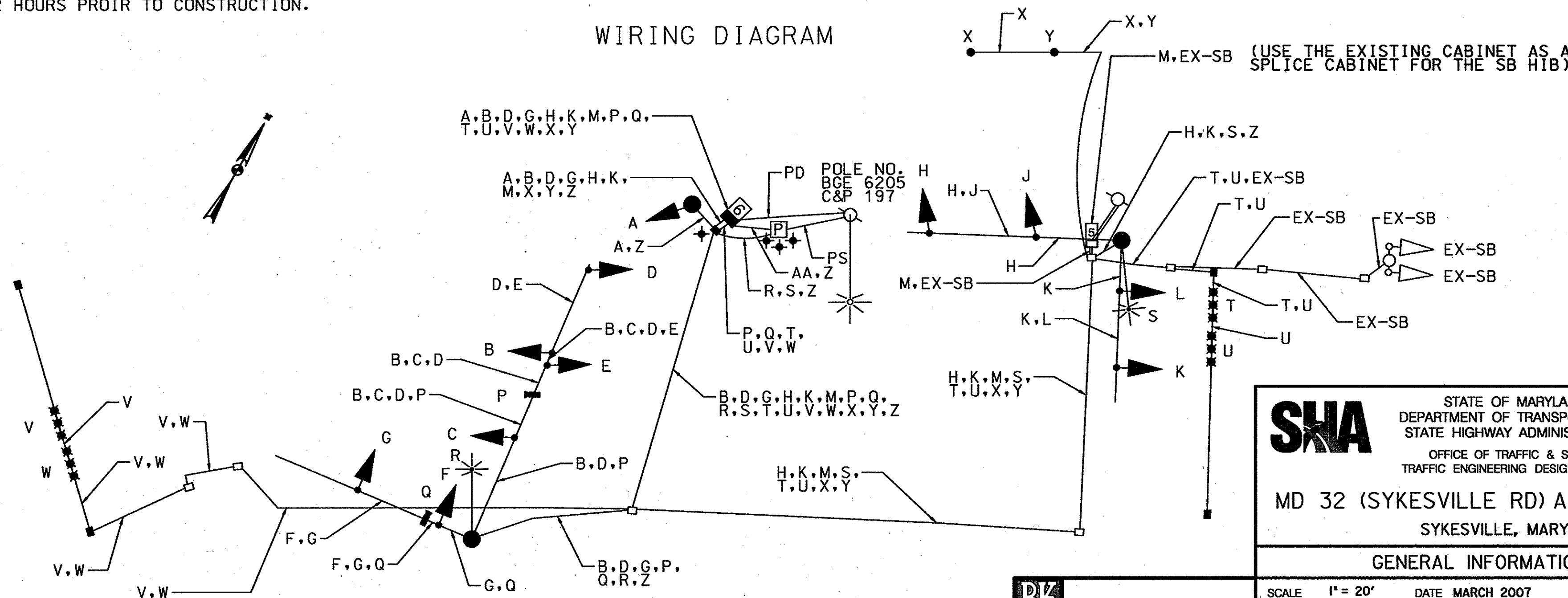
	1	2	3	4	5	6	7	8	9	10	11	12	13
PHASE 2 & 6	G	G	G	G	G	R	R	FL/8"Y	FL/8"Y	FL/8"R	FL/8"R	DARK	DARK
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	FL/8"Y	FL/8"Y	FL/8"R	FL/8"R	DARK	DARK
PHASE 1 & 6	G	G	G	R	R	R	R	FL/8"Y	FL/8"Y	FL/8"R	FL/8"R	DARK	DARK
1 CHANGE	G	G	G	R	R	R	R	FL/8"Y	FL/8"Y	FL/8"R	FL/8"R	DARK	DARK
PHASE 4	R	R	R	R	R	G	G	FL/8"Y	FL/8"Y	FL/8"R	FL/8"R	DARK	DARK
4 CHANGE	R	R	R	R	R	Y	Y	FL/8"Y	FL/8"Y	FL/8"R	FL/8"R	DARK	DARK
CLEARANCE A	R	R	R	G	G	R	R	FL/8"Y*	FL/8"Y*	FL/8"R	FL/8"R	FL/Y	FL/Y
CLEARANCE A CHANGE	R	R	R	G	G	R	R	Y	Y	FL/8"R	FL/8"R	FL/Y	FL/Y
PRE-EMPTION PHASE	R	R	R	G	G	R	R	R	R	FL/8"Y	FL/8"Y	FL/Y	FL/Y
PRE-EMPTION CHANGE	R	R	R	G	G	R	R	R	R	Y	Y	FL/Y	FL/Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/8"Y	FL/8"Y	FL/8"R	FL/8"R	DARK	DARK

* USE QUICKFLASH FOR SIGNAL HEADS 8 AND 9 DURING CLEARANCE 'A'

GENERAL NOTES

- VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
- ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.

WIRING DIAGRAM



TOD NO: AT783-26M
SHA No: CL417A53/B53/MS3
MD 32 @ Freedom Avenue



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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 32 (SYKESVILLE RD) AT FREEDOM AVE
SYKESVILLE, MARYLAND

GENERAL INFORMATION SHEET

SCALE 1" = 20' DATE MARCH 2007 CONTRACT NO. AT7835185

DESIGNED BY TC/MRB	COUNTY CARROLL
DRAWN BY TC/MRB	LOGMILE 06003202.18
CHECKED BY D.EBY	TMS NO. H985
FAP NO.	TOD NO.

TS NO. 4553-GI DRAWING - OF SHEET NO. 3 OF 3